

INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP2004/007469

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 H02M3/335 H02M3/157

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 H02M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 417 653 B1 (WICKERSHAM ROBERT D ET AL) 9 July 2002 (2002-07-09) column 4, lines 16-27; figure 1	1,6
A	US 5 666 463 A (SCHOENBAUER STEVE D ET AL) 9 September 1997 (1997-09-09) the whole document	1,6
A	US 4 630 187 A (HENZE CHRISTOPHER P) 16 December 1986 (1986-12-16) column 6, line 62 - line 67; figure 1a	1,6

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

A document defining the general state of the art which is not considered to be of particular relevance

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O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

Z document member of the same patent family

Date of the actual completion of the international search

9 September 2004

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16/09/2004

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Information on patent family members

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6417653	B1	04-04-2002	US 2002039017 A1	04-04-2002
			AU 7155198 A	24-11-1998
			DE 19882350 T0	13-04-2000
			GB 2358295 A ,B	18-07-2001
			GB 2339309 A ,B	19-01-2000
			WO 9849607 A1	05-11-1998
US 5666463	A	09-09-1997	DE 4421105 A1	04-05-1995
			GB 2283584 A ,B	10-05-1995
			JP 7170779 A	04-07-1995
US 4630187	A	16-12-1986	CA 1276975 C	27-11-1990
			CA 1313689 B	16-02-1993